Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1.-14. (Cancelled).

15. (Previously presented) A derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), wherein the amino acid sequence of said derivative has the same number of amino acids as said GLP-1 (7-37), and at least 80% amino acid identity to said GLP-1 (7-37), and wherein said derivative has an insulinotropic activity that exceeds the insulinotropic activity of GLP-1 (1-37) and GLP-1 (1-36).

16. (Previously presented) The derivative of claim 15, wherein said derivative has at least 90% amino acid identity to said GLP-1 (7-37).

17. (Previously presented) The derivative of claim 15, wherein said derivative has at least 95% amino acid identity to said GLP-1 (7-37).

18. (Previously presented) A derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), wherein the amino acid sequence of said derivative has the same number of amino acids as said GLP-1 (7-37), and an insulinotropic activity that exceeds the insulinotropic activity of GLP-1 (1-37) and GLP-1 (1-36), and wherein the amino acid

sequence of said derivative is that of GLP-1 (7-37) except that an amino acid residue has been substituted with a different amino acid residue.

19. (Previously presented) The derivative of claim 18, wherein a hydrophobic amino acid residue of GLP-1 (7-37) has been substituted with a different hydrophobic amino acid residue.

20. (Withdrawn) The derivative of claim 18, wherein a basic amino acid residue of GLP-1 (7-37) has been substituted with a different basic amino acid residue.

21. (Withdrawn) The derivative of claim 18, wherein an aromatic amino acid residue of GLP-1 (7-37) has been substituted with a different aromatic amino acid residue.

22. (Withdrawn) A derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), said derivative having the formula:

(1) H_2N-X-CO-R^1

- wherein R^1 is OH, OM, or -N R^2 R^3;

- M is a pharmaceutically acceptable cation or a lower branched or unbranched alkyl group;

- R^2 and R^3 are the same or different and selected from the group consisting of hydrogen and a lower branched or unbranched alkyl group;

- X is a derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), wherein the amino acid sequence of said derivative has the same number of amino acids as said GLP-1 (7-37), and has at least 80% amino acid identity to said GLP-1 (7-37);

- NH_2 is the amine group of the amino terminus of X;

- CO is the carbonyl group of the carboxy terminus of X;

(2) the acid addition salts of (1);

(3) the amino or carboxyl protected form of (1);

(4) a pharmaceutically acceptable carboxylate salt of said peptide;

(5) a pharmaceutically acceptable lower alkyl ester of said peptide; or

(6) a pharmaceutically acceptable amide of said peptide;

wherein said derivative has an insulinotropic activity that exceeds the insulinotropic activity of GLP-1 (1-37) and GLP-1 (1-36).

23. (Withdrawn) The derivative of claim 22, wherein said derivative has at least 90% amino acid identity to said GLP-1 (7-37).

24. (Withdrawn) The derivative of claim 22, wherein said derivative has at least 95% amino acid identity to said GLP-1 (7-37).

25. (Withdrawn) A derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), said derivative having the formula:

(1) H_2N-X-CO-R^1

- wherein R^1 is OH, OM, or -N R^2 R^3;

- M is a pharmaceutically acceptable cation or a lower branched or unbranched alkyl group;

- R^2 and R^3 are the same or different and selected from the group consisting of hydrogen and a lower branched or unbranched alkyl group;

- X is a derivative of glucagon-like peptide-1 (7-37), (GLP-1 (7-37)), wherein the amino acid sequence of said derivative is that of GLP-1 (7-37) except that an amino acid residue has been substituted with a different amino acid residue;

- NH_2 is the amine group of the amino terminus of X;

- CO is the carbonyl group of the carboxy terminus of X;

(2) the acid addition salts of (1);

(3) the amino or carboxyl protected form of (1);

(4) a pharmaceutically acceptable carboxylate salt of said peptide;

(5) a pharmaceutically acceptable lower alkyl ester of said peptide; or

(6) a pharmaceutically acceptable amide of said peptide;

wherein said derivative has an insulinotropic activity that exceeds the insulinotropic activity of GLP-1 (1-37) and GLP-1 (1-36).

26. (Withdrawn) The derivative of claim 25, wherein a hydrophobic amino acid residue of GLP-1 (7-37) has been substituted with a different hydrophobic amino acid residue.

27. (Withdrawn) The derivative of claim 25, wherein a basic amino acid residue of GLP-1 (7-37) has been substituted with a different basic amino acid residue.

28. (Withdrawn) The derivative of claim 25, wherein an aromatic amino acid residue of GLP-1 (7-37) has been substituted with a different aromatic amino acid residue.

29. (Cancelled)

30. (new) A compound which is:

(A) a peptide having at least 80% homology with glucagon-like peptide-1 (7-37) (GLP-1 (7-37)), with the proviso that the peptide is not GLP-1 (7-34), GLP-1 (7-35), GLP-1 (7-36) or GLP-1 (7-37); or

(B) a peptide which is

(i) a pharmaceutically acceptable acid addition salt of (A);

(ii) a pharmaceutically acceptable carboxylate salt of (A);

(iii) a pharmaceutically acceptable lower alkyl ester of (A); or

(iv) a pharmaceutically acceptable amide, alkyl amide or dialkyl amide of (i), (ii), or (iii);

wherein the compound is substantially free of natural contaminants, and has an insulinotropic activity which exceeds the insulinotropic activity of GLP-1 (1-36) or GLP-1 (1-37).

31. (new) A compound according to claim 30 having an insulinotropic activity at a concentration of at least 10^{-11} M.

32. (new) A compound according to claim 30, having an insulinotropic activity at a concentration of at least 10^{-10} M.

33. (new) An insulinotropic medicament comprising an effective amount of a compound according to claim 30 in combination with a pharmaceutically acceptable carrier.

34. (new) A compound which is:

(A) a peptide having at least 80% homology with glucagon-like peptide-1 (7-36) (GLP-1 (7-36)), with the proviso that the peptide is not GLP-1 (7-34), GLP-1 (7-35), GLP-1 (7-36) or GLP-1 (7-37); or

(B) a peptide which is

(i) a pharmaceutically acceptable acid addition salt of (A);

(ii) a pharmaceutically acceptable carboxylate salt of (A);

(iii) a pharmaceutically acceptable lower alkyl ester of (A); or

(iv) a pharmaceutically acceptable amide, alkyl amide or dialkyl amide of (i), (ii), or (iii);

wherein the compound is substantially free of natural contaminants, and has an insulinotropic activity which exceeds the insulinotropic activity of GLP-1 (1-36) or GLP-1 (1-37).

35. (new) A compound according to claim 34 having an insulinotropic activity at a concentration of at least 10^{-11} M.

36. (new) A compound according to claim 34, having an insulinotropic activity at a concentration of at least 10^{-10} M.

37. (new) An insulinotropic medicament comprising an effective amount of a compound according to claim 34 in combination with a pharmaceutically acceptable carrier.

38. (new) A compound which is:

(A) a peptide having at least 80% homology with glucagon-like peptide-1 (7-35) (GLP-1 (7-35)) or glucagon-like peptide-1 (7-34) (GLP-1 (7-34)), with

the proviso that the peptide is not GLP-1 (7-34), GLP-1 (7-35), GLP-1 (7-36) or GLP-1 (7-37); or

(B) a peptide which is

(i) a pharmaceutically acceptable acid addition salt of (A);

(ii) a pharmaceutically acceptable carboxylate salt of (A);

(iii) a pharmaceutically acceptable lower alkyl ester of (A); or

(iv) a pharmaceutically acceptable amide, alkyl amide or dialkyl amide of (i), (ii), or (iii);

wherein the compound is substantially free of natural contaminants, and has an insulinotropic activity which exceeds the insulinotropic activity of GLP-1 (1-36) or GLP-1 (1-37).

39. (new) A compound according to claim 38 having an insulinotropic activity at a concentration of at least 10^{-11} M.

40. (new) A compound according to claim 38, having an insulinotropic activity at a concentration of at least 10^{-10} M.

41. (new) An insulinotropic medicament comprising an effective amount of a compound according to claim 38 in combination with a pharmaceutically acceptable carrier.